

**Math: Grade 3, Lesson 5, Meaning of the Unknown in Division Continued**

**Lesson Objective:** Meaning of the Unknown in Division

**Practice Focus:** Understand the meaning of the unknown as the number of groups in division.

**TN Standard:** 3.OA.A.2

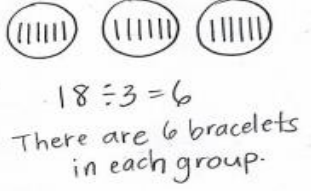
**Teacher Video Materials:**

- White board and markers
- 18 counters

**Student materials:**

- paper and pencil,
- 18 counters (concrete objects)
- the student packet for Math, Grade 3, Lesson 5 which can be found at [www.tn.gov/education](http://www.tn.gov/education)

Teacher Do	Student Do
<p><b>Opening</b> Hello! Welcome to Tennessee's At Home Learning Series for math! Today's lesson is for all our 3<sup>rd</sup> graders out there, though all children are welcome to tune in. This lesson is the fifth in our series.</p> <p>My name is _____ and I'm a _____ grade teacher in Tennessee schools! I'm so excited to be your teacher for this lesson! Welcome to my virtual classroom!</p> <p>Today, we're going to think about the meaning of an unknown as the number of groups in a division problem. If you didn't see our previous lesson, you can find it on <a href="http://www.tn.gov/education">www.tn.gov/education</a>. You can still tune in to today's lesson if you haven't seen any of our others. But, it might be more fun if you first go back and watch our other lessons, since we'll be talking about things we learned previously. Before we get started, to participate fully in our lesson today, you will need:</p> <ul style="list-style-type: none"> <li>• 18 counters – these can be any object that you have around you, such as crayons, pieces of candy, pieces of cereal, or torn pieces of paper</li> <li>• paper and a pencil, and a surface to write on</li> <li>• the student packet for Math, Grade 3, Lesson 5 which can be found at <a href="http://www.tn.gov/education">www.tn.gov/education</a></li> </ul> <p>Okay, let's begin!</p>	<p>Students get materials ready for the lesson.</p>
<p><b>Intro</b> Let's first warm up with a review problem. If you have paper and pencil, you'll need that now.</p> <p>Stacey has 18 bracelets. After she organizes the bracelets by color, she has 3 equal groups. How many bracelets are in</p>	

<p>each group? Draw a model and write a division equation for this problem. [Pause.]</p> <p>Here is a way that you could have solved this problem. I drew three circles and put 6 lines in each circle. 18 divided by 3 equals 6. There are 6 bracelets in each group.</p> 	<p>Student draws picture and writes answer.</p>
<p><b>Teacher Model</b></p> <p>This summer, my friend Cynthia is having a party. Eighteen people are coming. I told her I'd help her set up tables. We know that 6 people can sit at each table, but we're not sure how many tables we'll need. What information do Cynthia and I already have? [Pause.]</p> <p>We know the total number of people is 18, and we know how many people are sitting together - 6. That's the size of the group.</p> <p>What information don't we know? [Pause.]</p> <p>Right, we don't know how many tables we need. That's the number of equal groups.</p> <p>Let's use counters to show the problem and check our thinking. If you have 18 counters, 1 for each person coming to the party, put them into groups of 6. [Place 18 counters into groups of six, counting as you go.] 1,2,3,4,5,6. 1,2,3,4,5,6. 1,2,3,4,5,6.</p> <p>Looking at our models, what else do we now know? [Pause.]</p> <p>Yes, we know there are 3 groups. So, that means Cynthia needs 3 tables to fit everyone. [Write <math>18 \div 6 = 3</math> on the board.] How does this number sentence relate to the problem we just solved? [Pause.]</p> <p>It shows that we divided. We divided them into groups with 6 people. We divided the total by the size of the group and found the number of groups.</p>	<p>Student answers.</p> <p>Student answers.</p> <p>Student uses counters along with teacher.</p> <p>Student answers.</p> <p>Student answers.</p>
<p><b>Guided Practice</b></p> <p>Let's practice another problem together. You can work along with me using paper and pencil.</p>	

Here is the problem: Cynthia plans to buy 15 burgers. Three burgers come in each pack. How many packs should she buy?

What do the numbers 15 and 3 represent in this problem?  
[Pause]

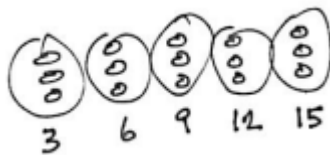
Fifteen is the total number of burgers. Three is the number of burgers in a pack. Is the unknown the number of groups or the size of the group? [Pause]

Yes, the unknown is the number of groups.

On your paper, write the equation you would use to find how many packs to buy. [Pause while student writes the equation.]

Your equation might look like this. [Write  $15 \div 3 = \underline{\quad}$  on the board.] 15 divided by 3 equals blank.

Let's draw to find out how many packs Cynthia needs. [Draw the following model.] I am going to draw groups of three until I get to 15 total. 1,2,3. 4,5,6. 7,8,9. 10,11,12. 13,14,15. Now, I am going to circle each group of three. How many groups of three do I have? [Pause]



Right, there are 5 groups of three. Cynthia needs 5 packs. Let's write the total number of burgers under each pack. 3,6,9,12,15. How many total burgers does Cynthia have in 1 pack? [Pause]

I see that there are 3 burgers in 1 pack. How many are in 2 packs? [Pause]

Yes, I can count the number in two of the groups and you're right, there are 6 in 2 packs.

How many are in 3 packs? [Pause]

There are 9 in three packs. How many are in four packs? [Pause]

There are 12 in four packs. How many are in five packs? [Pause]

Student answers.

Student answers.

Student writes the equation.

Student answers.

Student answers.

Student answers.

Student answers.

Student answers.

Student answers.

<p><b>There are 15 in five packs.</b> <b>I notice that each time we added a group, we added 3. We counted by 3s five times!</b></p>	
<p><b><u>Independent Practice</u></b></p> <p><b>Great work boys and girls! Today, we reviewed the meaning of an unknown as the number of groups in a division problem. Thank you for working along with me.</b></p> <p><b>I'll leave you with something to think about: as we've worked through several multiplication and division problems, think about how you could explain all the ways multiplication and division are connected to someone in your house.</b></p> <p><b>You sure did a great job! After the video, you will have some problems to practice on your own. Good luck and do your best!</b></p>	
<p><b><u>Closing</u></b> <b>Boys and Girls, I enjoyed learning about math with you today! Thank you for inviting me into your home. I look forward to seeing you in our next lesson in Tennessee's At Home Learning Series!</b></p> <p><b>Bye!</b></p>	

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